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AUTHOR Claus, Richard N.; Quimper, Barry E.
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ABSTRACT

This evaluation report describes and assesses a compensatory education delivery system in the school district of Saginaw, Michigan. Three reading and math programs, for selected grades between grade 1 and grade 9, had the following goals: (1) to provide intensive academic instruction to the educationally disadvantaged; (2) to involve parents in the program; (3) to supply students with incentives for academic improvement; (4) to operate staff inservice programs; (5) to measure academic growth; and (6) to prepare students to effectively meet the academic competition of the general classroom. The 1986-87 delivery system showed a decrease from the previous year in the percentage of participants who achieved grade level in reading. There was some improvement in the percentage who achieved grade level in math. The overall results remained strong. The following recommendations were made: (1) communications should be improved among all involved in compensatory education programs; (2) there must be more inservice activities; (3) there must be greater recognition and rewards for excellence for both students and teachers; (4) student testing and selection procedures must be improved; and (5) efforts must be made to reduce variations in the program between building sites. Statistical data are presented in four tables and three appendices. (VM)

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EVALUATION REPORT

COMPENSATORY EDUCATION PRODUCT EVALUATION:

ACADEMIC ACHIEVEMENT (A^2) AND
PREVENTION (P^2) PROGRAMS

1986-1987

DEPARTMENT OF EVALUATION SERVICES

- PROVIDING ASSESSMENT, PROGRAM EVALUATION AND RESEARCH SERVICES -

Saginaw Public Schools

Saginaw, Michigan

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COMPENSATORY EDUCATION PRODUCT EVALUATION:

ACADEMIC ACHIEVEMENT (A^2) AND
PREVENTION (P^2) PROGRAMS

1986-1987

An Approved Report of the

DIVISION OF ADMINISTRATION AND PERSONNEL

Department of Evaluation, Testing and Research

Richard N. Claus, Ph.D.
Manager, Program Evaluation

Barry E. Quimper, Director
Evaluation, Testing & Research

Dr. Foster B. Gibbs, Superintendent and
Dr. Jerry R. Baker, Assistant Superintendent
for Administration and Personnel
School District of the City of Saginaw

July, 1987

TABLE OF CONTENTS

	Page
PROGRAM DESCRIPTION	1
PROCEDURES FOR EVALUATION	4
PRESENTATION AND ANALYSIS OF DATA: PRODUCT	5
Product Data: Reading	5
Product Data: Mathematics	6
Product Data: Prevention Program (P2)	7
SUMMARY AND CONCLUSIONS	12
RECOMMENDATIONS	14
APPENDICES	18
Appendix A: 1986-87 Count of Program Participants	19
Appendix B: Achievement Data Related to Funding Sources ..	32
Appendix C: Mean Percentile Gain by Building and Grade for All 2-4 Prevention Pupils in Reading and Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	38

LIST OF TABLES

Table		Page
1	Attainment of the Performance Standard in Reading in Percentile Scores for Compensatory Education Participants, Grades 1-9	5
2	Attainment of the Performance Standard in Mathematics in Percentile Scores for Compensatory Education Participants, Grades 1-9	6
3	Attainment of the Performance Standard in Reading and Mathematics for Prevention Program Participants, Grades 2-4	7
4	Mean Percentile Gain of Prevention Pupils Versus A Comparison Group of Pupils in Reading and Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	9
B.1	Mean Percentile Gain by Building and Grade for All 1-6 Chapter 1 Pupils in Reading Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	32
B.2	Mean Percentile Gain by Building and Grade for All Chapter 1 Pupils in Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	33
B.3	Mean Percentile Gain by Building for All 7-9 Chapter 1 Pupils in Reading and Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	34
B.4	Mean Percentile Gain by Building and Grade for All 1-6 Chapter 1/Article 3 Pupils in Reading Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring) ..	35
B.5	Mean Percentile Gain by Building and Grade for All 1-6 Chapter 1/Article 3 Pupils in Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring) ..	36

LIST OF TABLES (CONTINUED)

Table		Page
B.6	Mean Percentile Gain by Building for All 7-9 Chapter 1/Article 3 Pupils in Reading and Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	37
C.1	Mean Percentile Gain by Building and Grade for All 2-4 Prevention Pupils in Reading and Mathematics Based on April-May, 1986 Pre-Testing and April-May, 1987 Post-Testing on CAT (Spring to Spring)	38

PROGRAM DESCRIPTION

The School District of the City of Saginaw operated a compensatory education delivery system in reading and mathematics consisting of three programs--Elementary Academic Achievement (A^2), Secondary Academic Achievement (A^2), and the Prevention Program (P^2). The elementary A^2 was a pull-out program (periodically taking students out of regular classrooms) that involved approximately 2,029 students in grades one through six. The secondary A^2 was a self-contained classroom program that involved 382 students in grades seven through nine. The A^2 program was the primary compensatory education delivery system as it was the older, more well-established and larger of the delivery systems. It was funded by both the Federal Education Consolidation and Improvement Act (ECIA) Chapter 1 and Article 3 of the State School Aid Act.

P^2 was a program that operated in regular classrooms with student/teacher ratios of approximately 13 to 1. During this, the third year of the three year pilot effort, the program served some 202 youngsters in grades two through four. P^2 classrooms were housed at four elementary school sites (Nelle Haley, Heavenrich, Longfellow, and Jessie Rouse). It was funded by both ECIA Chapter 1 and General Fund.

Summarized in the chart below are demographic characteristics that describe both the elementary and secondary levels of A^2 and elementary P^2 in greater detail.

DEMOGRAPHIC CHARACTERISTICS OF THE ACADEMIC ACHIEVEMENT AND PREVENTION PROGRAMS

Program	Grade Levels Served	Approximate Number of Students Served	Number of Full-Time Equivalent Teachers	Number of Full-Time Equivalent Aides	Number of Elementary Sch Sites	Program Setting*	Instructional Services
Academic Achievement, Elementary	1-6	2,029	32.0	4.5	23	Pull-out	- Reading - Mathematics
Academic Achievement, Secondary	7-9	382	8.6	0.0	3	Self-Contained Classroom	- Reading - Mathematics
Prevention, Elementary	2-4	202	17.0**	0.0	4	Self-Contained Classroom	- Reading - Mathematics

*Students in intact classrooms receive 75% or more of their compensatory education instruction within the confines of the classroom, while students in the pull-out program receive 75% or more of their compensatory instruction outside the confines of their regular classroom.

**Of the 17 full-time equivalent teachers, 8.5 are funded by General Fund sources and the other 8.5 are funded by ECIA Chapter 1.

As can be seen from the chart above, the primary purpose of the programs was to improve the reading and mathematics achievement of a designated number of educationally disadvantaged children. The children in the program were screened for entry with the California Achievement Tests (CAT). This year approximately 2,613 pupils participated in the compensatory education programs. A count of students by building, grade, and funding source can be found in Appendix A.

The broad goals of these programs are to: 1) provide intensive academic instruction to the educationally disadvantaged, 2) involve parents in the program, 3) supply students with incentives for academic improvement, 4) operate staff inservice programs, 5) measure academic growth, and 6) prepare students to effectively meet the academic competition of the general classroom. These goals are the focus of the Compensatory Education Department's activities throughout the 1986-87 school year.

PROCEDURES FOR EVALUATION

Both process and product evaluations were undertaken for the compensatory education delivery system consisting of A^2 and P^2. This year's process evaluation was accomplished by distributing and analyzing a set of needs assessment questionnaires which were shared with all compensatory education teachers, a sample of regular education teachers, and each principal at the compensatory education buildings. The instruments were distributed to the respondents on December 4, 1986. Completed instruments were last received from respondents on January 19, 1987. The results of this process needs assessment were presented in a separate report published and disseminated earlier in the year.

The product evaluation, which is the focus of this report, addresses the results of student test performance. The California Achievement Tests (CAT) for grades 1-9 served as the evaluation instruments. These tests were administered on a pre-test basis in the Spring, 1986 (CAT Form-C) and on a post-test basis in Spring, 1987 (CAT Form-E). These two forms were used and equated.

Mean pre- to post-test score comparisons were used to evaluate the effectiveness of the delivery systems. The agreed upon standard was an improvement of post-test over pre-test percentile scores. The reading and then the mathematics results for the entire compensatory education's delivery system (A^2 and P^2 combined) will be presented. Following that will appear the P^2 test score results separately.

PRESENTATION AND ANALYSIS OF DATA: PRODUCT

The primary goal of compensatory education was to increase reading and mathematics achievement. The data presented in this section will indicate the extent to which this goal was achieved. Reading and then mathematics data by grade are presented below. These results are followed by a comparison of the outcomes for P^2 in both subjects. The achievement results by school are presented in Appendix B.

Product Data: Reading

The pre- and post-test results for reading are presented in Table 1. These data reflect the impacts of both A^2 and P^2 programs combined.

TABLE 1. ATTAINMENT OF THE PERFORMANCE STANDARD IN READING IN PERCENTILE SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 1-9.

Spring to Spring Comparisons by Grade	Number of Students Pre- and Post-Tested	Percentile			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
1	56	2.2	34.0	31.8	Yes
2	289	7.6	18.9	11.3	Yes
3	310	14.6	23.8	9.2	Yes
4	304	17.5	23.1	5.6	Yes
5	253	16.8	19.5	2.7	Yes
6	339	13.9	20.3	6.4	Yes
7	77	13.1	10.4	- 2.7	No
8	100	6.7	9.0	2.3	Yes
9	69	7.3	8.3	1.0	Yes

*Post-test percentile scores will evidence improvement over pre-test percentile scores.

A study of the reading results show that students met the performance standard at all grades except seven. At the seventh grade level, the scores indicated an average loss of -2.7 percentile points between pre- and post-testings. At grade one, the largest gain (31.8 percentile points) was recorded. See Appendix B for the test results by building and funding source.

Product Data: Mathematics

Table 2 below presents the attainment of the performance standard for spring to spring data in mathematics. The data reflect the efforts of both A^2 and P^2 programs.

TABLE 2. ATTAINMENT OF THE PERFORMANCE STANDARD IN MATHEMATICS IN PERCENTILE SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 1-9.

Spring to Spring Comparisons by Grade	Number of Students Pre- and Post-Tested	Percentile			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
1	44	10.6	57.6	47.0	Yes
2	203	18.6	35.2	16.6	Yes
3	279	17.9	35.1	17.2	Yes
4	219	25.6	30.3	4.7	Yes
5	196	16.2	32.8	16.6	Yes
6	195	17.9	39.0	21.1	Yes
7	46	6.1	13.7	7.6	Yes
8	65	9.2	10.6	1.4	Yes
9	45	6.6	8.4	1.8	Yes

*Post-test percentile scores will evidence improvement over pre-test percentile scores.

A review of mathematics results reveals that students met the performance standard in all grades. The gain score at the first grade level, indicated the largest improvement (47 percentile points) between pre- and post-testings. At the eighth grade, the smallest percentile gain (1.4 points) was observed. See Appendix B for the test results by building and funding source.

Product Data: Prevention Program (P2)

Table 3 below presents the pre- to post-test results for P^2 pupils in both reading and mathematics.

TABLE 3. ATTAINMENT OF THE PERFORMANCE STANDARD IN READING AND MATHEMATICS FOR PREVENTION PROGRAM PARTICIPANTS, GRADES 2-4.

Spring to Spring Comparisons by Subject Area and Grade	Number of Students Pre- and Post-Tested	Percentile			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
Reading					
2	66	6	22	16	Yes
3	69	18	33	15	Yes
4	58	17	21	4	Yes
Mathematics					
2	66	24	43	19	Yes
3	69	27	49	22	Yes
4	58	25	24	- 1	No

*Post-test percentile scores will evidence improvement over pre-test percentile scores.

An examination of Table 3 reveals that the performance standard was attained in both reading and mathematics at all three

grade levels except for grade 4 in mathematics. See Appendix C for test results by building and grade.

Table 4 below presents the pre- to post-test results for P^2 pupils contrasted with an A^2 comparison group of pupils in reading and mathematics. The comparison group was randomly selected from similar A^2 buildings at the beginning of the school year. A t-test showed no significant differences ($\alpha = .05$) between the pre-test means by grade.

TABLE 4. MEAN PERCENTILE GAIN OF PREVENTION PUPILS VERSUS A COMPARISON GROUP OF PUPILS IN READING AND MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SUBJECT/ GROUP	Grade 2				Grade 3				Grade 4			
		Percentiles				Percentiles				Percentiles		
	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain
READING												
Experimental	66	6	22	16	69	18	33	15	58	17	21	4
Comparison	63	8	17	9	67	13	16	3	56	15	19	4
MATHEMATICS												
Experimental	66	24	43	19	69	27	49	22	58	25	24	- 1
Comparison	63	30	33	3	67	22	33	11	56	25	36	11

As can be seen in Table 4, all mean percentile gains were greater than zero except for P^2 at grade 4 in mathematics (mean gain = -1 percentile). Thus the comparison group in terms of the standard that post-test percentile scores will evidence improvement over pre-test percentile scores showed one more positive mean gain (6 of 6 cells or 100%) than the experimental P^2 group (5 of 6 cells or 83.3%).

The evaluation design for testing differences between experimental P^2 and A^2 Chapter 1 students was strengthened this year by adding a randomly selected comparison group of A^2 participants. As with the previous year, the "rule of ten"[1] was employed as a more stringent standard of performance. The "rule of ten" helps answer the question of how big a difference is needed before two group averages can be considered meaningfully different. The rule states that if a ten point difference between two group averages expressed in national percentile (NP) units is observed, it may then be concluded the difference is large enough to be meaningful.

The chart below presents the mean gain differences between experimental P^2 and the comparison A^2 groups, i.e., P^2 mean NP gain - A^2 mean NP gain = mean NP gain difference of P^2.

Mean NP Gain Difference of P^2 - A^2

	Grade 2	Grade 3	Grade 4
Reading	7	12	0
Mathematics	16	11	-12

[1] McRae, Douglas J., Hill's Handy Hints. McRae's Michigan Measurement Memos from Ann Arbor, 1986, 11, 3-4.

A perusal of the chart in light of the above 10 or more point standard for a meaningful difference in terms of P^2 indicates that three of the six cells (grade 2 mathematics and grade 3 reading and mathematics) show P^2 to have superior performance as compared to the A^2 comparison group. The other three cells (grade 2 reading and grade 4 reading and mathematics) show no meaningful difference in favor of P^2. In fact, A^2 out gains P^2 in mathematics at grade 4 by 12 percentile points.

Overall, during the three years of piloting, the Prevention Program (P^2) does not appear to produce consistent positive results to justify continuing its implementation. The need for stronger controls on the nature of the program seemed evident from the start. Given the program's additional costs and lack of consistent and sizeable gains over the A^2 program, it seems unwarranted to continue this pilot.

SUMMARY AND CONCLUSIONS

The Chapter 1 and Article 3 Academic Achievement (A^2) and Prevention Program (P^2) were designed to provide direct instructional services in reading and mathematics to some 2,613 students in grades one through nine. The main intent of the A^2 and P^2 programs was to improve the pupil's reading and/or mathematics achievement. Instruction occurred primarily in small group settings outside of the regular classroom for A^2 at the elementary level, and in a regular classroom setting with a reduced number of students for A^2 at the secondary level and P^2 in grades 2-4.

The 1986-87 compensatory education delivery system showed a decrease from the previous year in terms of the percentage of grade levels meeting the standard in reading while the results improved in mathematics (100% vs. 89% in reading and 89% vs. 100% in mathematics for 1985-86 and 1986-87 respectively). Overall, A^2 results remain strong. Positive student achievement gains were realized again this year.

The P^2 pilot showed an increase from the previous year in terms of the percentage of grade levels meeting the standard in reading while the results showed a decrease in mathematics (67% vs. 100% in reading and 100% vs. 67% in mathematics for 1985-86 and 1986-87 respectively). A special analysis of P^2 compared to an A^2 comparison group showed that P^2 showed meaningful differences in three of the six (50.0%) possible comparisons with A^2. This would seem to indicate that the pilot of P^2 should be stopped because of the absence of consistent positive results over the course of the three year P^2 pilot.

The results of the pre- to post-testing of compensatory education students indicate that overall the greatest gains in reading were made at the first grade level, but that all grades attained the performance standard except grade 7. Mathematics gains were again the greatest at grade 1, but all grades met the standard.

As mentioned earlier, a process evaluation report was completed this year and is available from the Department of Evaluation, Testing and Research. The findings from that report as well as those cited above were used in helping develop the recommendations that follow.

RECOMMENDATIONS

Based on this year's process and product evaluations and a meeting with the program director, the following recommendations are offered in an effort to improve the implementation of the A^2 program for 1987-88.

1. Further improve communications between all individuals involved in the compensatory education effort. A number of essential elements are needed.

   - A more detailed written plan of all components of the compensatory education programs needs to be developed. It is suggested that the plan include both an activity timeline and listing of duties of director, compensatory teachers, and evaluators. A clear statement of process and product objectives and priorities for each component of the various programs is also needed.

   - The initial kick-off meeting should stress the following: essential elements of the program (e.g., number of pupils to be served, number of hours of service per pupil, nature of building level plans, budget for each program site, etc.), planned changes in delivery of services, packets of new materials, timelines and deadlines, inservice schedule, inservice education's relationship to the program's goals and objective, parent activities, evaluation activities, observations by director, etc.

   - A policy statement needs to be formulated and put into effect to include:

     --Staff duties directly related to program goals.

     --Allotment of staff time to ensure performance of duties.

--Selection of diagnostic-prescriptive tool to focus on students' needs and corrective measures.

--Determination of equitable means of fund distribution to ensure adequate materials and supplies.

- Written material (e.g., brochures, flyers, newsletters, etc.) and public gatherings (e.g., assemblies, open houses, conferences, etc.) for parents need to be developed and carried out related to the purposes, rationale, and techniques used in the A^2 program.

2. More compensatory education sponsored inservice activities. These activities might include:

- Establish a committee of A^2 teachers to plan and execute A^2 inservices for compensatory and regular education staff. Topics for these sessions might include:

--Student monitoring techniques for secondary and elementary teachers that provide continuous feedback of progress to the student, as well as, the teacher.

--Reading and mathematics materials that are appropriate for secondary compensatory education students.

--Available computer software and its application to support compensatory education instruction at elementary and secondary levels.

--Techniques to motivate secondary students to greater levels of achievement.

--Coordination of compensatory education instruction with other secondary teachers.

--Articulation of objectives and teaching strategies between elementary and secondary.

- Explore means of encouraging attendance at professional conferences by granting conference days and compensating for expenses.

- Consider the possibility of conducting inservices for compensatory education parents in the area of parenting skills, the educational resources available to assist them in this parenting role, how to understand their child's test data, what can parents do to improve their child's behavior in school, and volunteer options for becoming involved in activities that support the instructional program.

3. Greater recognition and rewards for excellence. Excellence to be rewarded and/or recognized could include:

   - Teaching excellence displayed by compensatory education instructors.

   - Student accomplishments for academic achievement and excellent behavior in the compensatory education progam are recognized in the regular classroom and school.

   - Parents are told of student successes in the compensatory education program.

4. Improved student testing and student selection procedures. Techniques to make improvements in this area might include:

   - Create a system-wide testing inservice program on the appropriate methods of preparing students for taking standardized tests and the importance of following exact test directions to ensure useable results. This might be done in video form.

   - Provide better inservice training to the building testing coordinators. This training should be very specific concerning the various tasks related to monitoring and coordinating the building level standardized testing program. The building level testing coordinator has a responsibility to inservice staff on how to administer the test in the standardized fashion and then monitor the administration in selected classes to check on the adequacy of the standardization achieved.

- Allow for teacher input as well as test data as valid means to determine the eligibility of needy students.

5. Reduce variations in the program between building sites by having the director and compensatory education staff analyze the building results presented in Appendix B. Hopefully, a plan can be formulated to reduce (or control) these variations in program impact. Of course, in some instances it is understood that relatively poor performance was caused by unanticipated problems such as the extended illness of a key teacher, etc. To some extent, the above recommendations that increase communications relative to program definitions and operations will in part help reduce variations between program sites.

APPENDICES

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Chapter 1, Total Participants

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	25	22	22	35	25	29	158
Coulter	0	24	20	20	12	12	25	113
Emerson	0	1	23	29	18	29	28	128
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	14	23	14	34	18	41	144
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	30	16	24	20	27	123
Herig	0	0	0	0	0	0	0	0
Houghton	0	28	22	24	28	21	31	154
Jerome	0	0	0	0	0	0	0	0
Jones	0	3	14	30	17	21	22	107
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	7	39	44	40	26	33	189
Longstreet	0	14	15	14	10	5	21	79
J. Loomis	0	5	38	46	29	38	33	189
M. Park	0	0	0	0	0	0	0	0
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	0	0	0	0	0	0	0
Morley	0	17	20	24	13	22	19	115
J. Rouse	0	5	21	30	17	12	17	102
Salina	0	17	16	17	17	14	20	101
Stone	0	0	0	0	0	0	0	0
Webber Elem.	0	14	32	41	27	34	36	184
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	180	335	371	321	297	382	1,886

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Chapter 1, Reading

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	25	21	22	35	22	25	150
Coulter	0	18	13	15	8	11	23	88
Emerson	0	25	21	22	35	22	25	116
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	13	23	14	33	14	33	130
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	30	15	19	17	26	113
Herig	0	0	0	0	0	0	0	0
Houghton	0	27	22	19	28	20	30	146
Jerome	0	0	0	0	0	0	0	0
Jones	0	3	14	24	16	18	16	91
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	6	36	32	35	23	23	155
Longstreet	0	14	15	13	10	3	20	75
J. Loomis	0	5	26	34	25	33	33	156
M. Park	0	0	0	0	0	0	0	0
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	0	0	0	0	0	0	0
Morley	0	17	13	12	5	13	11	71
J. Rouse	0	5	19	29	15	9	14	91
Salina	0	12	11	10	15	12	18	78
Stone	0	0	0	0	0	0	0	0
Webber Elem.	0	14	26	33	22	25	34	154
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	166	292	293	282	249	332	1,614

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Chapter 1, Mathematics

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	16	6	5	15	14	9	65
Coulter	0	19	12	14	8	8	5	66
Emerson	0	1	7	19	7	15	9	58
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	14	19	13	30	14	24	114
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	27	14	23	14	18	102
Herig	0	0	0	0	0	0	0	0
Houghton	0	16	8	15	17	13	13	82
Jerome	0	0	0	0	0	0	0	0
Jones	0	3	10	23	5	14	13	68
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	4	31	39	28	9	21	132
Longstreet	0	2	5	11	6	4	8	36
J. Loomis	0	4	26	37	13	33	12	125
M. Park	0	0	0	0	0	0	0	0
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	0	0	0	0	0	0	0
Morley	0	0	15	20	13	15	14	77
J. Rouse	0	2	17	30	17	6	11	83
Salina	0	17	9	15	14	7	13	75
Stone	0	0	0	0	0	0	0	0
Webber Elem.	0	7	15	20	12	26	15	95
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	111	207	275	208	192	185	1,178

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Chapter 1, Total Participants**

Building	7	8	9	Total
Central Junior	40	45	31	116
Arthur Eddy	37	46	35	118
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	33	65	50	148
TOTAL	110	156	116	382

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Chapter 1, Reading**

Building	7	8	9	Total
Central Junior	38	32	20	90
Arthur Eddy	28	35	31	94
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	26	52	35	113
TOTAL	92	119	86	297

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Chapter 1, Mathematics**

Building	7	8	9	Total
Central Junior	20	29	14	63
Arthur Eddy	19	33	16	68
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	25	31	32	88
TOTAL	64	93	62	219

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Article 3, Total Participants

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	25	22	22	35	25	29	158
Coulter	0	24	20	20	12	12	25	113
Emerson	0	1	23	29	18	29	28	128
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	14	23	14	34	18	41	144
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	30	16	24	20	27	123
Herig	0	1	3	9	5	9	2	29
Houghton	0	28	22	24	28	21	31	154
Jerome	0	8	20	11	18	12	15	84
Jones	0	3	14	30	17	21	22	107
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	7	39	44	40	26	33	189
Longstreet	0	14	15	14	10	5	21	79
J. Loomis	0	5	38	46	29	38	33	189
M. Park	0	6	9	6	20	6	8	55
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	10	5	24	9	8	10	66
Morley	0	17	20	24	13	22	19	115
J. Rouse	0	5	21	30	17	12	17	102
Salina	0	17	16	17	17	14	20	101
Stone	0	14	12	18	25	15	27	111
Webber Elem.	0	14	32	41	27	34	36	184
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	219	384	439	398	347	444	2,231

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Article 3, Reading

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	25	21	22	35	22	25	150
Coulter	0	18	13	15	8	11	23	88
Emerson	0	1	23	21	16	29	26	116
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	13	23	14	33	14	33	130
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	30	15	19	17	26	113
Herig	0	1	3	5	5	4	0	18
Houghton	0	27	22	19	28	20	30	146
Jerome	0	7	15	6	15	10	11	64
Jones	0	3	14	24	16	18	16	91
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	6	36	32	35	23	23	155
Longstreet	0	14	15	13	10	3	20	75
J. Loomis	0	5	26	34	25	33	33	156
M. Park	0	6	5	5	15	4	5	40
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	10	5	24	9	5	9	62
Morley	0	17	13	12	5	13	11	71
J. Rouse	0	5	19	29	15	9	14	91
Salina	0	12	11	10	15	12	18	78
Stone	0	13	11	18	25	14	17	98
Webber Elem.	0	14	26	33	22	25	34	154
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	203	331	351	351	286	374	1,896

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Article 3, Mathematics

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	16	6	5	15	14	9	65
Coulter	0	19	12	14	8	8	5	66
Emerson	0	1	7	19	7	15	9	58
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	14	19	13	30	14	24	114
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	6	27	14	23	14	18	102
Herig	0	1	1	5	3	6	2	18
Houghton	0	16	8	15	17	13	13	82
Jerome	0	3	11	8	13	7	8	50
Jones	0	3	10	23	5	14	13	68
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	4	31	39	28	9	21	132
Longstreet	0	2	5	11	6	4	8	36
J. Loomis	0	4	26	37	13	33	12	125
M. Park	0	2	8	5	11	6	5	37
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	0	1	15	7	6	6	35
Morley	0	0	15	20	13	15	14	77
J. Rouse	0	2	17	30	17	6	11	83
Salina	0	17	9	15	14	7	13	75
Stone	0	9	7	6	15	12	23	72
Webber Elem.	0	7	15	20	12	26	15	95
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	126	235	314	257	229	229	1,390

*Counts of the Experimental Prevention Program are included in this count at the four effected elementaries. See later pages in this appendix for the counts of the Experimental Prevention Program separately.

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Article 3, Total Participants**

Building	7	8	9	Total
Central Junior	40	45	31	116
Arthur Eddy	37	46	35	118
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	33	65	50	148
TOTAL	110	156	116	382

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Article 3, Reading**

Building	7	8	9	Total
Central Junior	38	32	20	90
Arthur Eddy	28	35	31	94
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	26	52	35	113
TOTAL	92	119	86	297

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: **Article 3, Mathematics**

Building	7	8	9	Total
Central Junior	20	29	14	63
Arthur Eddy	19	33	16	68
North Intermediate	0	0	0	0
South Intermediate	0	0	0	0
Webber Junior	25	31	32	88
TOTAL	64	93	62	219

APPENDIX A

1986-87 COUNT OF PROGRAM PARTICIPANTS

PROGRAM: Experimental Prevention

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	0	0	0	0	0	0	0
Coulter	0	0	0	0	0	0	0	0
Emerson	0	0	0	0	0	0	0	0
Fuerbringer	0	0	0	0	0	0	0	0
N. Haley	0	0	15	10	27	0	0	52
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	0	25	13	12	0	0	50
Herig	0	0	0	0	0	0	0	0
Houghton	0	0	0	0	0	0	0	0
Jerome	0	0	0	0	0	0	0	0
Jones	0	0	0	0	0	0	0	0
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	0	15	22	11	0	0	48
Longstreet	0	0	0	0	0	0	0	0
J. Loomis	0	0	0	0	0	0	0	0
M. Park	0	0	0	0	0	0	0	0
C. Miller	0	0	0	0	0	0	0	0
J. Moore	0	0	0	0	0	0	0	0
Morley	0	0	0	0	0	0	0	0
J. Rouse	0	0	14	27	11	0	0	52
Salina	0	0	0	0	0	0	0	0
Stone	0	0	0	0	0	0	0	0
Webber Elem.	0	0	0	0	0	0	0	0
Zilwaukee	0	0	0	0	0	0	0	0
TOTAL	0	0	69	72	61	0	0	202

TABLE B.1. MEAN PERCENTILE GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1 PUPILS IN READING BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	GRADE 1				GRADE 2				GRADE 3				GRADE 4				GRADE 5				GRADE 6			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	5	7	39	32	20	6	15	9	20	15	20	5	29	13	20	7	20	12	13	1	22	16	24	8
Coulter	1	11	39	28	11	9	16	7	15	20	23	3	6	11	12	1	9	20	20	0	21	24	26	2
Emerson	1	11	43	32	22	7	10	3	19	9	15	6	14	18	23	5	27	16	16	0	25	13	20	7
Haley	1	1	62	61	19	17	37	20	10	21	23	2	29	18	36	18	14	26	26	0	33	17	26	9
Heavenrich	3	1	6	5	25	3	29	26	15	15	45	30	17	18	15	- 3	14	13	15	2	24	15	16	1
Houghton	6	2	62	60	20	7	18	11	15	20	17	- 3	25	29	29	0	13	23	18	- 5	27	9	17	8
Jones	3	1	26	25	14	7	15	8	22	16	15	- 1	14	15	15	0	16	15	16	1	14	16	18	2
Longfellow	2	5	18	13	33	9	26	17	29	17	29	12	29	16	24	8	22	17	26	9	22	11	16	5
Longstreet	2	1	23	22	13	5	13	8	10	17	18	1	9	15	20	5	2	20	17	- 3	17	30	32	2
Loomis	4	2	39	37	24	5	15	10	29	9	21	12	21	20	23	3	29	15	18	3	30	13	15	2
Morley	--	--	--	--	11	11	16	5	12	12	45	33	5	13	15	2	10	21	15	- 6	9	13	9	- 4
Rouse	3	1	26	25	19	7	15	8	27	17	34	17	14	16	15	- 1	9	20	21	1	12	15	29	14
Salina	2	18	62	44	11	34	21	-13	10	5	9	4	15	17	24	7	11	11	26	15	17	13	17	4
Webber Ele.	8	2	37	35	22	7	21	14	27	20	22	2	16	21	21	0	24	20	24	4	31	11	18	7
SYSTEM	41	2.2	32.1	29.9	253	7.3	11.3	4.0	260	14.6	23.1	8.5	243	17.5	21.6	4.1	220	16.5	18.9	2.4	304	12.6	19.5	6.9

TABLE B.2. MEAN PERCENTILE GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1 PUPILS IN MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	GRADE 1				GRADE 2				GRADE 3				GRADE 4				GRADE 5				GRADE 6			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	3	60	70	10	5	27	54	27	5	24	29	5	13	16	37	21	13	18	21	3	8	20	37	17
Coulter	2	7	84	77	10	13	24	11	14	26	26	0	6	11	23	12	6	18	50	32	5	29	36	7
Emerson	1	15	54	39	7	16	7	- 9	18	7	21	14	5	21	37	16	15	23	20	- 3	7	20	21	1
Haley	2	13	83	70	15	36	52	16	9	41	37	- 4	26	36	45	9	14	26	41	15	24	16	41	25
Heavenrich	3	1	15	14	24	18	56	38	14	30	37	7	20	13	11	- 2	12	16	17	1	16	15	24	9
Houghton	3	9	81	72	6	29	15	-14	10	32	18	-14	14	56	63	7	6	24	37	13	12	24	34	10
Jones	3	18	40	22	10	16	56	40	21	13	26	13	4	15	11	- 4	13	17	34	17	10	15	29	14
Longfellow	2	5	56	51	28	15	30	15	36	20	47	27	25	20	23	3	7	12	32	20	17	18	47	29
Longstreet	2	2	54	52	4	13	20	7	8	26	29	3	5	15	39	24	3	16	49	33	6	50	73	23
Loomis	3	5	39	34	23	10	11	1	32	8	26	18	9	15	41	26	29	8	32	24	11	18	26	8
Morley	—	—	—	—	13	15	72	57	19	21	73	52	13	15	32	17	12	37	63	26	9	32	45	13
House	2	7	56	49	16	29	30	1	28	29	52	23	16	21	20	- 1	6	5	32	27	9	15	29	14
Salina	2	47	69	22	9	62	21	-41	14	8	30	22	12	15	32	17	5	3	86	83	12	18	58	40
Webber Ele.	7	6	62	56	15	10	49	39	18	18	37	19	10	15	26	11	24	16	32	16	13	13	23	10
SYSTEM	35	10.0	56.1	46.1	185	18.9	34.7	15.8	246	17.7	36.3	18.6	178	28.6	29.9	1.3	165	15.6	32.5	16.9	159	18.7	39.4	20.7

TABLE B.3. MEAN PERCENTILE GAIN BY BUILDING FOR ALL 7-9 CHAPTER 1 PUPILS IN READING AND MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	Grade 7				Grade 8				Grade 9			
		Percentiles				Percentiles				Percentiles		
	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain
READING												
Eddy	23	11	9	- 2	28	6	10	4	27	8	9	1
Central	35	20	15	- 5	28	12	9	3	17	6	8	2
Webber	19	7	7	0	44	5	9	4	25	9	9	0
System	77	13.1	10.4	- 2.7	100	6.7	9.0	2.3	69	7.3	8.3	1.0
MATHEMATICS												
Eddy	9	8	12	4	23	15	16	1	14	9	9	0
Central	19	3	16	13	20	12	12	0	10	3	9	6
Webber	18	13	13	0	22	5	6	1	21	9	9	0
System	46	6.1	13.7	7.6	65	9.2	10.6	1.4	45	6.6	8.4	1.8

TABLE B.4. MEAN PERCENTILE GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1/ARTICLE 3 PUPILS IN READING BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	GRADE 1				GRADE 2				GRADE 3				GRADE 4				GRADE 5				GRADE 6			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	5	7	39	32	20	6	15	9	20	15	20	5	29	13	20	7	20	12	13	1	22	16	24	8
Coulter	1	11	39	28	11	9	16	7	15	20	23	3	6	11	12	1	9	20	20	0	21	24	26	2
Emerson	1	11	43	32	22	7	10	3	19	9	15	6	14	18	23	5	27	16	16	0	25	13	20	7
Fuerbringer	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Haley	1	1	62	61	19	17	37	20	10	21	23	2	29	18	36	18	14	26	26	0	33	17	26	9
Heavenrich	3	1	6	5	25	3	29	26	15	15	45	30	17	18	15	- 3	14	13	15	2	24	15	16	1
Herig	1	5	39	34	3	15	27	12	5	13	41	28	5	15	29	14	4	23	32	9	--	--	--	--
Houghton	6	2	62	60	20	7	18	11	15	20	17	- 3	25	29	29	0	13	23	18	- 5	27	9	17	8
Jerome	7	2	32	30	10	6	21	15	5	12	15	3	12	15	26	11	9	17	24	7	10	15	26	11
Jones	3	1	26	25	14	7	15	8	22	16	15	- 1	14	15	15	0	16	15	16	1	14	16	18	2
Kempton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Longfellow	2	5	18	13	33	9	26	17	29	17	29	12	29	16	24	8	22	17	26	9	22	11	16	5
Longstreet	2	1	23	22	13	5	13	8	10	17	18	1	9	15	20	5	2	20	17	- 3	17	30	32	2
Loomis	4	2	39	37	24	5	15	10	29	9	21	12	21	20	23	3	29	15	18	3	30	13	15	2
Merrill Park	4	1	47	46	3	5	32	27	4	15	37	22	14	18	41	23	3	23	15	- 8	4	19	69	50
Miller	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Moore	--	--	--	--	1	5	50	45	21	16	30	14	7	18	20	2	5	15	23	8	8	20	29	9
Morley	--	--	--	--	11	11	16	5	12	12	45	33	5	13	15	2	10	21	15	- 6	9	13	9	- 4
Rouse	3	1	26	25	19	7	15	8	27	17	34	17	14	16	15	- 1	9	20	21	1	12	15	29	14
Salina	2	18	62	44	11	34	21	-13	10	5	9	4	15	17	24	7	11	11	26	15	17	13	17	4
Stone	3	9	50	41	8	16	10	- 6	15	15	24	9	23	18	29	11	12	20	23	3	13	5	20	15
Webber Ele.	8	2	37	35	22	7	21	14	27	20	22	2	16	21	21	0	24	20	24	4	31	11	18	7
Zilwaukee	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SYSTEM	56	2.2	34.0	31.8	289	7.6	18.9	11.3	310	14.6	23.8	9.2	304	17.5	23.1	5.6	253	16.8	19.5	2.7	339	13.9	20.3	6.4

TABLE B.5. MEAN PERCENTILE GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1/ARTICLE 3 PUPILS IN MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	GRADE 1				GRADE 2				GRADE 3				GRADE 4				GRADE 5				GRADE 6			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	3	60	70	10	5	27	54	27	5	24	29	5	13	16	37	21	13	18	21	3	8	20	37	17
Coulter	2	7	84	77	10	13	24	11	14	26	26	0	6	11	23	12	6	18	50	32	5	29	36	7
Emerson	1	15	54	39	7	16	7	- 9	18	7	21	14	5	21	37	16	15	23	20	- 3	7	20	21	1
Fuerbringer	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Haley	2	13	83	70	15	36	52	16	9	41	37	- 4	26	36	45	9	14	26	41	15	24	16	41	25
Heavenrich	3	1	15	14	24	18	56	38	14	30	37	7	20	13	11	- 2	12	16	17	1	16	15	24	9
Herig	1	18	70	52	1	5	7	2	5	18	47	29	3	20	39	19	6	24	69	45	2	26	99	73
Houghton	3	9	81	72	6	29	15	-14	10	32	18	-14	14	56	63	7	6	24	37	13	12	24	34	10
Jerome	3	5	36	31	6	21	45	24	7	16	26	10	9	12	30	18	6	17	26	9	7	20	32	12
Jones	3	18	40	22	10	16	56	40	21	13	26	13	4	15	11	- 4	13	17	34	17	10	15	29	14
Kempton	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Longfellow	2	5	56	51	28	15	30	15	36	20	47	27	25	20	23	3	7	12	32	20	17	18	47	29
Longstreet	2	2	54	52	4	13	20	7	8	26	29	3	5	15	39	24	3	16	49	33	6	50	73	23
Loomis	3	5	39	34	23	10	11	1	32	8	26	18	9	15	41	26	29	8	32	24	11	18	26	8
Merrill Park	2	1	26	25	7	15	62	47	3	17	45	28	11	15	54	39	5	26	36	10	4	6	50	44
Miller	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Moore	--	--	--	--	--	--	--	--	13	24	26	2	5	11	18	7	5	23	16	- 7	5	24	54	30
Morley	--	--	--	--	13	15	72	57	19	21	73	52	13	15	32	17	12	37	63	26	9	32	45	13
Rouse	2	7	56	49	16	29	30	1	28	29	52	23	16	21	20	- 1	6	5	32	27	9	15	29	14
Salina	2	47	69	22	9	62	21	-41	14	8	30	22	12	15	32	17	5	3	86	83	12	18	58	40
Stone	3	58	95	37	4	18	17	- 1	5	15	11	- 4	13	18	23	5	9	16	32	16	18	12	41	29
Webber Ele.	7	6	62	56	15	10	49	39	18	18	37	19	10	15	26	11	24	16	32	16	13	13	23	10
Zilwaukee	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SYSTEM	44	10.6	57.6	47.0	203	18.6	35.2	16.6	279	17.9	35.1	17.2	219	25.6	30.3	4.7	196	16.2	32.8	16.6	195	17.9	39.0	21.1

TABLE B.6. MEAN PERCENTILE GAIN BY BUILDING FOR ALL 7-9 CHAPTER 1/ARTICLE 3 PUPILS IN READING AND MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	Grade 7				Grade 8				Grade 9			
		Percentiles				Percentiles				Percentiles		
	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain
READING												
Eddy	23	11	9	- 2	28	6	10	4	27	8	9	1
Central	35	20	15	- 5	28	12	9	3	17	6	8	2
Webber	19	7	7	0	44	5	9	4	25	9	9	0
System	77	13.1	10.4	- 2.7	100	6.7	9.0	2.3	69	7.3	8.3	1.0
MATHEMATICS												
Eddy	9	8	12	4	23	15	16	1	14	9	9	0
Central	19	3	16	13	20	12	12	0	10	3	9	6
Webber	18	13	13	0	22	5	6	1	21	9	9	0
System	46	6.1	13.7	7.6	65	9.2	10.6	1.4	45	6.6	8.4	1.8

TABLE C.1. MEAN PERCENTILE GAIN BY BUILDING AND GRADE FOR ALL 2-4 PREVENTION PUPILS IN READING AND MATHEMATICS BASED ON APRIL-MAY, 1986 PRE-TESTING AND APRIL-MAY, 1987 POST-TESTING ON CAT (SPRING TO SPRING).

SCHOOL	Grade 2				Grade 3				Grade 4			
		Percentiles				Percentiles				Percentiles		
	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain	Number Tested	Pre Mean	Post Mean	Mean Gain
READING												
Haley	13	15	36	21	8	21	24	3	25	17	33	16
Heavenrich	24	3	29	26	13	15	49	34	11	18	13	- 5
Longfellow	15	8	15	7	21	18	27	9	11	19	12	- 7
Rouse	14	6	13	7	27	17	33	16	11	16	18	2
System	66	6	22	16	69	18	33	15	58	17	21	4
MATHEMATICS												
Haley	13	35	51	16	8	38	39	1	25	36	43	7
Heavenrich	24	6	56	50	13	28	35	7	11	13	10	- 3
Longfellow	15	22	28	6	21	21	54	33	11	25	17	- 8
Rouse	14	27	30	3	27	29	55	26	11	22	22	0
System	66	24	43	19	69	27	49	22	58	25	24	- 1